

Recovery Plan Action Status

Plan Name: Black Lace Cactus (Echinocereus reichenbachii var. albertii) Recovery Plan

Plan Status: Final

Plan Date: 18-Mar-87

Lead Agency: USFWS

Lead Office: Corpus Christi Ecological Services Field Office

(361-994-9005)

Species	Action Priority #	Action #	Action Description	Action Status	Est. Initiation Date	Est. Completion Date	Responsible Parties	Work Type	Labor Type	Action Comments
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	11	Enforce existing regulations	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Law Enforcement Division, U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Other: Regulations	Internal Technical Assistance	
Black lace cactus (Echinocereus reichenbachii var. albertii)	1	121	Provide habitat protection through private landowners	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Division of Realty, U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Acquisition: Management Agreement, Other	Internal Technical Assistance	In FY08, identified most recent landowners for BLC populations in Kleberg and Jim Wells Counties - initiated contact to ask for access - no replies to date. Dr. Liz Smith with TAMUCC, continues to work with these LO's who supported her Sect. 6 proposal to conduct research on the population
Black lace cactus (Echinocereus reichenbachii var. albertii)	1	122	Obtain long-term protection of essential habitat	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Division of Realty, U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Acquisition: Easement	Internal Technical Assistance	FY08: there is a Safe Harbor Agreement in place for the next 98 years which provides for searches for BLC and AV of impacts when habitat management is proposed - only applies to existing refugio populations and any other that might be located in north coastal bend counties.

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Black lace cactus (Echinocereus reichenbachii var. albertii)	2	131	Post no-trespassing signs	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Management: Land Use	Contract	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	132	Monitor for grazing impacts	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Competition	Species Expert	Local botanist visited a BLC site in 2004 and indicated that some plants were uprooted by feral hogs and had been kicked over by cattle; no other disturbances had been noted. No formal research has been initiated.
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	133	Monitor for collecting impacts	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: General	Species Expert	In 1991, a Section 6 Final Report found that three subspecies including E.reichenbachii var. fitchii were heavily collected. At this time, there was still some taxonomic confusion about the distinction between spp albertii and fitchii; therefore, this species collected may have been Black lace (Final Report from TPWD 1991).
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	134	Monitor for disease or other natural impacts	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Disease	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	14	Develop and implement habitat management plans	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Management: Habitat Maintenance and Manipulation	Internal Field Assistance	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	15	Locate safe sites for potential reintroductions	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Habitat Requirements	Species Expert	

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Black lace cactus (Echinocereus reichenbachii var. albertii)	2	16	Establish botanical garden populations	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2, Desert Botanical Gardens	Management: Propagation	Species Expert	Tried to establish a population in 1990 with seedlings planted at CCBG but later survey attempts showed that invasive grasses took over. In 2004, seeds were from fruit were produced at Refugio Co. site which were collected and stored at DBG. Germination studies done on seedlings; they did not survive (2004). In 2006, seeds collected from fruits of Refugio Co. population and stored at DBG. And until FY08, seeds at DGB have been in long-term storage. In 2009, Sue Sill (botanist) and others looked at this population again and were unable to locate plants-totally overgrown with invasives.

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Black lace cactus (Echinocereus reichenbachii var. albertii)	2	17	Search for new populations within the range of the variety	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2, Texas A&M University Kingsville	Management: General, Research: Population Surveys	Graduate Student, Species Expert	FY08, TNC has been doing surveys for rare plants including BLC in the Refugio-Goliad Prairie but did not find BLC. In early 2010, graduate student and botanists went searching for a record of the Refugio population on the north side of Jaboncillos Creek- were not able to find this population; tall grasses were present. However, this survey did produce several new plants in the salt/creek bed just south of this recorded population.
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	21	Determine edaphic requirements for the variety	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: General	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	22	Determine pollinators	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Propagation	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	23	Study population dynamics of known populations	Ongoing Current	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Habitat Requirements, Research: Population Surveys	Species Expert	In 2003, soils at the Refugio population were described along with associated woody and herbaceous vegetation.
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	3	Determine genetic relationships with closely related taxa	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Genetics	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	4	Develop a trade management plan for all cacti	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Management: General	Internal Technical Assistance	

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Black lace cactus (Echinocereus reichenbachii var. albertii)	3	51	Investigate feasibility of large scale production of cultivated seedlings	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Propagation	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	3	52	Develop procedures for clonal propagation	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Research: Propagation	Species Expert	
Black lace cactus (Echinocereus reichenbachii var. albertii)	3	6	Determine delisting criteria	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Management: General	Internal Field Assistance	
Black lace cactus (Echinocereus reichenbachii var. albertii)	2	7	Develop public awareness	Unknown	Prior to FY 1995		U.S. Fish and Wildlife Service, Endangered Species Division, USFWS Regional Office 2	Other: Information and Education	Internal Technical Assistance	